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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/856,795	08/14/2001	Arnon Shani	U013484-1	3790

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EXAMINER

JIANG, SHAOJIA A

ART UNIT	PAPER NUMBER
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1617

DATE MAILED: 05/08/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/856,795

Applicant(s)

SHANI ET AL.

Examiner

Shaojia A. Jiang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 February 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-52 is/are pending in the application.
- 4a) Of the above claim(s) 13-18, 23 and 32-37 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12, 19-22, 24-31, and 38-52 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This application is a 371 of PCT/IL99/00660 which claims priority to Isreal 127396 (December 3, 1998).

Applicant's preliminary amendment in response to the Restriction Requirement in Paper No. 7, submitted February 12, 2002 is acknowledged. Claims 2-3 and 25 have been amended.

Election/Restrictions

Applicant's election with traverse of the invention of species of an alginate polysaccharide, a protein which is gelatin, a pheromone which is gossyplure, and a gellant which a calcium salt solution, in Paper No. 7, submitted February 12, 2002 is acknowledged.

The traversal is on the ground(s) that there is presently no ground on the basis of alleged lack of unity since no prior art has been cited. This is not found persuasive. It is noted that cited art is not required to support a Restriction Requirement/Specie Election. MPEP § 803. As discussed in the Specie Election Requirement dated October 10, 2001, the species of claims 1-52 do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, the species lack the same or corresponding special technical features, i.e., common central core or significant element is not present (a significant structural element is not shared by all of the alternatives). One having skill in the art would recognize that for example, an essential

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oil, a pesticide and an attractant may differ by a significant structural feature and function.

Thus, the requirement is still deemed proper and is therefore made FINAL.

Claims 13-18, 23, and 32-37 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim.

The claims have been examined insofar as they read on the elected specie.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 10, 24, and 28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The expression "a bioactive material" in claim 10 render claim 10 indefinite as failing to clearly set forth the metes and bounds of the patent protection desired. Therefore, the scope of claims is indefinite as to the composition encompassed thereby.

The expression "a slower release rate" in claim 24 renders claim 24 indefinite since the term "slower" is a relative term. The term " slower " is not defined in the specification and claim. The scope of the claims is indefinite since the degree of the slower release rate encompassed by the claim is unclear.

The expressions "a lower pH" and "a high pH" in claim 28 render claim 28 indefinite since the terms "lower" and "high" are a relative term. The terms "lower" and "high" are not defined in the specification and claim. The scope of the claims is indefinite since the value of the pH encompassed by the claim is unclear.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-2 are rejected under 35 U.S.C. 102(b) as being anticipated by Connick (4,401,456, PTO-892).

Connick discloses a sustained release, polymer, and water insoluble beads comprising a polymeric matrix containing emulsion droplets which being formed from alginate (the particular polysaccharide), bioactive material (one volatile hydrophobic component), and water; and the process for preparing such a sustained release, polymer, and water insoluble beads therein. See abstract, col.3 lines 4-15, Examples 1-14. Thus, Connick anticipates claims 1-2.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-12, 19-22, 24-31, and 38-52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Connick (4,401,456, PTO-892) and Nitto Electric Ind Co. (Abstract, JP58121212, PTO-892) in view of Meinke et al. (N, PTO-892).

Connick discloses a sustained release, polymer, and water insoluble beads comprising a polymeric matrix containing emulsion droplets which being formed from aliginate (the particular polysaccharide), bioactive material (one volatile hydrophobic component), and water; and the process for preparing such a sustained release, polymer, and water insoluble beads therein. Connick also discloses the size of beads therein is 0.1-5 mm, 0.8-2 mm, or 0.1-6 mm; and the gellant is a calcium solution; a bioactive material may be herbicide or insecticide. See abstract, col.1, col.3-4, col.5 lines 1-16, Examples 1-14 and claims 1-11.

Nitto et al. discloses a sustained release, polymer, and water insoluble gel-like body comprising sodium polyacrlate compound having at least one epoxy group per molecule, cationic surfactant, volatile substance which is in emulsion form, and water; the volatile substance which may be a perfume repellent, attractant, insecticide, and fungicide, is used in amount of 30% or less based on the total weight of the body. See abstract.

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The prior art does not expressly disclose that the particular surfactant may be a protein such as gelatin, that the particular volatile component may be pheromone such as gosspluer.

Meinke et al. discloses that the particular bioactive material, pheromone, is known to be used in a sustained release, polymer, and water insoluble delivery system for western corn rootworm. See abstract and the entire article.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to employ the particular surfactant such as a protein (gelatin), and employ the particular volatile component such as pheromone (gosspluer) in the instant claimed beads.

One having ordinary skill in the art at the time the invention was made would have been motivated to employ the particular surfactant such as a protein (gelatin) in the instant claimed beads since gelatin is a well known surfactant and well known to be useful in a sustained release, polymer, and water insoluble delivery system in the art. Moreover, the employment of surfactants broadly is known in the sustained release, polymer, and water insoluble beads of Connick and the sustained release, polymer, and water insoluble gel-like body of Nitto et al. Therefore, one of ordinary skill in the art would have reasonably expected that gelatin would be useful in the delivery systems of Connick and Nitto as a surfactant.

Additionally, one having ordinary skill in the art at the time the invention was made would have been motivated to employ the particular volatile component such as pheromone (gosspluer) in the instant claimed beads since the employment of bioactive

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material broadly such as a perfume repellent, attractant, insecticide, and fungicide, is known in the delivery systems of Connick and Nitto. Pheromone as herbicide or insecticide is also known to be useful in a sustained release, polymer, and water insoluble delivery system for western corn rootworm. Therefore, one of ordinary skill in the art would have employed the particular volatile component such as pheromone in the instant claimed sustained release system.

Thus the claimed invention as a whole is clearly prima facie obvious over the combined teachings of the prior art.

In view of the rejections to the pending claims set forth above, no claims are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to S. A. Jiang, whose telephone number is (703) 305-1008. The examiner can normally be reached on Monday-Friday from 9:00 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Minna Moezie, J.D., can be reached on (703) 308-4612. The fax phone number for the organization where this application or proceeding is assigned is (703) 308-4556.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-1235.

Shaojia A. Jiang, Ph.D.
Patent Examiner, AU 1617
May 1, 2002


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